

AMENDMENTS TO THE SPECIFICATION

The specification has been amended as follows:

[0012] An object of the present invention is to provide an improved auto lift ceiling lighting system in which a lamp can be turned on and off at any position while being raised and lowered~~ascending and descending~~, and which can endure the weight of the lamp thereby to preventing a fall, and which can ~~keep~~ maintain the balance of the lamp for smoothly lifting it to lift up and down the lamp smoothly without shaking, which can thereby preventing the twisting of a the wire and of the lamp itself.

[0014] To achieve these and other advantages and in accordance with the purpose of the present invention, as embodied and broadly described, an auto lift ceiling lighting system comprises a motor part for lifting the lamp up and down ~~the lamp~~; rotary drum parts installed on the coaxial shaft of both sides of the motor part, the rotary drum part having a winding core which has a passage hole formed inside part of the winding core and a an insertion hole formed on a part of the circumferential surface of the winding core and formed parallel to the central axis of the winding core, ~~and the~~ The winding core ~~being is~~ separated by the passage hole and the insertion hole; flat cables are wound ~~winded~~ on the rotary drum parts, the flat cable ~~which is~~ being formed in a flatly and evenly distribution and composed of an electric wire of ~~the~~ net form in the center of the soft PVC flat and stainless wires for enduring the weight of the lamp in both sides of the electric wire; power supply parts supplying ~~the~~ electric power to the flat cables, the power supply part comprising a brush electrode connected with the flat cable and an

insulator for preventing the electrical current from flowing from the brush electrode to the conductor of the left and right rotary drums and a brush supplying the electric power to the brush electrode and a brush holder for supporting the brush and a brush holder supporter supporting the brush holder, holder. One One side of the said brush electrode is formed in the shape of circular plane surface and the other side is formed in the shape of the male screw which ~~combines~~ connects a bolt with a terminal connected with the flat cable, cable. and the The said terminal connects and fixes the electrical wire of the flat cable inserted into the winding core; a body cover part ~~in which~~ fixes the motor part, the rotary drum ~~parts,~~ parts and the power supply part ~~are fixed;~~ a ballast for stabilizing the electricity supplied to the lamp, the ballast being installed below the body cover; a ballast box in which the ballast is installed; a lever the center of which is connected with the center of gravity of the ballast box, ~~and the both ends of which are~~ connected with the flat cables in the ballast box.

[0027] FIG. 11 is a cross-sectional view of A-A' of FIG. 10; and

[0028] FIG. 12 is a front view illustrating an auto lift ceiling lighting system according to another embodiment of the present invention.

Fig. 13 provides an exploded view of the portion of Fig. 8 shown in dotted lines;
and Fig. 14 shows, in detail, the combination of the winding cove and the flat cable.

[0031] As shown in the figures, ~~an~~ the auto lift ceiling lighting system comprises a motor part for ~~lifting up and down~~ a lamp 10 up and down; rotary drum parts comprising a left rotary drum 30 and right rotary drum 40 which are coaxially installed on the ~~coaxial~~ shaft ~~of~~ at both sides of the motor part; flat cables 50 and 50' winded on the outer surface of winding cores 31 and 31' which is installed on the inside of the left and right rotary drums 30 and 40 respectively; power supply parts 60 and 60' which ~~is~~ are installed on outer rotary drums 36 and 36' of the left and right rotary drums 30 and 40 and supply the electric power to the flat cables 50 and 50'; a body cover part 70 in which the motor part, rotary drum parts, the flat cables 50 and 50', and power supply parts 60 and 60' are combined together and fixed; and a ballast box comprising a ballast which is installed below the body cover part 70 and stabilizes the electricity supplied to the lamp 10, guide rollers 80 and 80' which ~~guides~~ guide flat cables 50 and 50' pulled down from the left and right rotary drums 30 and 40 and a gathering roller 90 which gathers the flat cables 50 and 50' guided by the guide rollers.

[0032] Especially, the left and right rotary drums 30 and 40' comprises winding cores 31 and 31' on which flat cables 50 and 50' ~~is~~ are winded, rollers 32 and 32' for supporting the flat cables 50 and 50' ~~for~~ of the lamp so as not to ~~be~~ become rotated or twisted, and roller supporter 33 and 33' installed on a lower cover of the body cover part 70 to support the rollers 32 and 32'.

[0033] ~~And a~~ A lever 120 is installed in the ballast box 100 which is ~~installed on~~ located at the upper side of the lamp, so that the balance of the lamp can be ~~kept~~ maintained.

[0034] ~~That is, the~~ The lever 120, ~~the~~ has a center of which ~~110~~ which is combined with the center of gravity of the ballast box 100, ~~is formed, and~~ The The flat cables 50 and 50' are connected to ~~with the~~ respective ends of the lever 120 ~~respectively~~. And the leverage of the lever 120 absorbs the vibration of the lamp 10 due to the difference of ~~in~~ the winding speed or an error of ~~in the winding of~~ the flat cables 50 and 50', ~~thereby~~ whereby the balance of the lamp 10 is maintained ~~kept~~ when the lamp 10 is raised ~~ascends and descends~~ lowered. The ~~said~~ removal of the vibration provides an observer under the lamp 10 with a sense of stability because shaking of the light is prevented while the lamp 10 is raised and/or lowered in the "on" position ~~ascends and descends~~ ~~with the lamp 10 on~~.

[0035] The winding cores 31 and 31' have respectively passage holes 34 and 34' formed inside part of the winding core and insertion holes 35 and 35' formed on a part of the circumferential surface of the winding core 31 and 31' and formed parallel to the central axis of the winding cores 31 and 31', and the winding cores 31 and 31' are respectively separated by the passage holes 34 and 34' and the insertion holes 35 and 35', ~~for~~ The flat cables 50 and 50' ~~to be~~ are inserted into the passage holes 34 and 34' via the insertion hole and connected to brush electrodes 61 and 61'. The flat cables 50

and 50' for supplying ~~the electrical~~ power to the lamp 10 are winded on the outer surface of the winding cores 31 and 31' of the left and right rotary drums 30 and 40.

[0036] The width W1 of the left and right rotary drums 30 and 40 of the rotary drum parts is formed to be as wide as the width W2 of the flat cables 50 and 50', ~~—, more~~ More ideally, the width W1 of the left and right rotary drums 30 and 40 is formed about 1mm wider than the width W2 of the flat cables 50 and 50', ~~—then~~ Then the flat cables 50 and 50' ~~is winded~~ are wound stably on the outer surface of the winding cores 31 and 31' of the left and right rotary drums 30 and 40 ~~which revolves~~ by a motor 21, and the flat cables 50 and 50' ~~is winded~~ are wound with ~~the both~~ sides of the flat cables 50 and 50' adjoining the outer rotary drums 36 and 36' and the inner drums 37 and 37' of the rotary drum parts. ~~Like this, the~~ The flat cables 50 and 50' ~~is winded~~ are wound on the outer surface of the winding cores 31 and 31' which are inside of the left rotary drum 30 and the right rotary drum 40, ~~hereby~~ so that the flat cables 50 and 50' ~~are~~ do not become twisted.

[0037] The body cover part 70 ~~comprises a~~ includes an upper cover 71 ~~in which is~~ provided with an aperture ~~the space is formed for~~ through which the housing of the motor 21 ~~to be protruded~~ extends so that the vibration of the motor 21 may be absorbed and the heat generated from the motor 21 may be ~~radiated; dissipated.~~ a lower cover 72 is provided on which the motor part 20, rotary drum parts, flat cables 50 and 50' and the power supply parts 60 and 60' are combined and installed ~~and fixed;~~ a

A body cover 73 ~~connectings~~ the upper cover 71 with the lower cover 72. Especially
~~†~~The lower cover 72 has paths 74 and 74' which allow the flat cables 50 and 50'
connected with the lamp 10 to smoothly move up and down smoothly.

[0038] The power supply parts 60 and 60' comprises brush electrodes 61 and 61'
connected with the flat cables 50 and 50' which are connected with the lamp 10 and ~~go~~
extend through the insertion holes 35 and 35' of the winding core 31 and 31' of the
rotary drum parts and ~~inserted~~ into the passage holes 34 and 34'; ~~insulators preventing~~
the electric current from flowing from brush electrodes 61 and 61' to conductors of the
left and right rotary drums 30 and 40'; ~~brushes~~ 63 and 63' supplying the electric power
to the brush electrodes 61 and 61'; ~~brush holders~~ 64 and 64' supporting the brushes
63 and 63'; and brush holder supporters 65 and 65'.

[0039] One side of the brush electrodes 61 and 61' ~~are~~ is formed in the shape of a
circular plane surface and the other side of the brush electrodes 61 and 61' ~~are~~ is
formed in the shape of ~~the~~ a male screw which connects ~~can combine~~ nuts 67 and 67'
with terminals 66 and 66' connecting the brush electrodes 61 and 61' with the electric
wire 52 of the flat cables 50 and 50'. The terminals 66 and 66' are connected with the
electric wire 52 of the flat cables 50 and 50' inserted into the winding cores 31 and 31'.

[0040] In addition, drum housings 23 and 23' combined with a horizontal shaft 22 ~~of the~~
at both sides of the motor 21, ~~inner~~ Inner rotary drums 37 and 37' of the left and right

rotary drums 30 and 40 combined with the drum housings 23 and 23', ~~connection.~~
Connection pins 24 and 24' ~~which allow~~ connect the drum housings 23 and 23' ~~to be~~
~~combined~~ with the motor 21, and a motor supporter 25 ~~supportings~~ the motor 21, ~~are~~
~~comprised.~~

[0041] 4 holes ~~perforated respectively in~~ penetrate the insulators 62 and 62', ~~the~~ The
left and right rotary drums 30 and 40, the winding cores 31 and 31', and the drum
housings 23 and 23' are ~~tightened~~ combined with bolts ~~to be combined in~~ to form one
body, ~~so they are combined~~ on the horizontal shaft 22 ~~of the~~ at both sides of the motor
21 and rotates ~~in~~ as a body by the operation of the motor 21.

[0042] The flat cable 50 comprises electrical wire 52 ~~of the~~ with a net form configuration
disposed in the center of ~~the~~ a soft PVC flat portion 51 and stainless wires 53 and 53'
~~enduring~~ are provided for withstanding the weight of the lamp 10 in both sides of the
electric wire 52.

[0043] As stated above, the auto lift ceiling lighting system of the present invention can
turn the lamp on and off at any position and can endure the weight of the lamp to
prevent ~~a it form~~ falling as well as ~~can keep~~ maintaining the balance of the lamp while
the lamp is raised and lowered ~~ascends and descends~~. ~~And t~~ The auto lift ceiling lighting
system also ~~can prevents~~ a twisting while the lamp ascends and descends.